

34. (New) The semiconductor device according to Claim 11, which is a single electron semiconductor device for controlling propagation of a single electron or a small number of electrons;

wherein said conic body is a silicon needle conic body protruded on said substrate as at least a part of a propagation passage for the single electron or the small number of electrons.

35. (New) The semiconductor device according to Claim 10, which is a single electron semiconductor device for controlling propagation of a single electron or a small number of electrons;

wherein said conic body is a silicon needle conic body protruded on said substrate;

wherein said semiconductor device further comprises a conducting material layer formed on said substrate to bury at least a lower portion of the silicon needle conic bodies;

wherein peripheral regions of the silicon needle conic bodies of the conducting material layer are functioned as quantum dots and small tunnel junctions to control the propagation of a single electron or a small number of electrons in the plane direction of the conducting material layer.

36. (New) The semiconductor device according to Claim 11, which is a single electron semiconductor device for controlling propagation of a single electron or a small number of electrons;

wherein said conic body is a silicon needle conic body protruded on said substrate;

wherein said semiconductor device further comprises a conducting material layer formed on said substrate to bury at least a lower portion of the silicon needle conic bodies;

wherein peripheral regions of the silicon needle conic bodies of the conducting material layer are functioned as quantum dots and small tunnel junctions to control the

propagation of a single electron or a small number of electrons in the plane direction of the conducting material layer.

37. (New) The semiconductor device according to Claim 10, which is a semiconductor memory for storing information by accumulating electric charges in a capacitor configuring each memory unit,

wherein said semiconductor memory further comprises a needle of silicon crystal formed in each memory unit, and a capacitor having the side face of the needle as one of electrodes.

38. (New) The semiconductor device according to Claim 10, which is a semiconductor memory for storing information,

wherein said semiconductor memory comprises an impurity precipitation region in a single-crystal silicon substrate or a single-crystal silicon layer,

said conic body which is a silicon crystal needle conic body formed in each memory unit on the substrate by subjecting the silicon substrate or the silicon layer to high selectivity anisotropic etching with the impurity precipitation region used as a micro mask, the silicon precipitation region having the micro mask at the top, and

a capacitor having the side face of the silicon crystal needle as one of electrodes, wherein information is stored by accumulating electric charges into the capacitor.

BASIS FOR THE AMENDMENT

New Claims 33-38 have been added.

New Claims 33 and 34 are supported by Claims 10, 11 and 13 as originally filed.

New Claims 35 and 36 are supported by Claims 10, 11 and 19 as originally filed.